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I am satisfied that our greatest error in teaching children to read, lies in beginning with the alphabet;—in giving them what are called the “Names of the Letters,” *a, b, c, &c.* How can a child to whom nature offers such a profusion of beautiful objects,—of sights and sounds and colors,—and in whose breast so many social feelings spring up;—how can such a child be expected to turn with delight from all these to the stiff and lifeless column of the alphabet? How can one who as yet is utterly incapable of appreciating the remote benefits, which in after-life reward the acquisition of knowledge, derive any pleasure from an exercise which presents neither beauty to his eye, nor music to his ear, nor sense to his understanding?

Although in former reports and publications* I have dwelt at length upon what seems to me the absurdity of teaching to read by *beginning* with the alphabet, yet I feel constrained to recur to the subject again,—being persuaded that no thorough reform will ever be effected in our schools until this practice is abolished.

When I first began to visit the Prussian schools, I uniformly inquired of the teachers, whether, in teaching children to read, they began with the “Names of the Letters,” as given in the alphabet. Being delighted with the prompt negative which I invariably received, I persevered in making the inquiry, until I began to perceive a look and tone on their part not very flattering to my intelligence, in considering a point so clear and so well settled as this, to be any longer a subject for discussion or doubt. The uniform statement was, that the alphabet, as such, had ceased to be taught *as an exercise preliminary to reading*, for the last fifteen or twenty years, by every teacher in the kingdom. Whoever will compare the German language with the English, will see that the reasons for a change are much stronger in regard to our own, than in regard to the foreign tongue.

The practice of beginning with the “Names of Letters,” is founded upon the idea that it facilitates the combination of them into words. On the other hand, I believe that if two chil-

* See Common School Journal, Vol. IV., pp. 9, 25, 40, *et passim*, throughout the Journal.

dren, of equal quickness and capacity, are taken, one of whom can name every letter of the alphabet, at sight, and the other does not know them from Chinese characters, the latter can be most easily taught to read,—in other words, that learning the letters first is an absolute hindrance.

The advocate for teaching the letters asks, if the elements of an art or science should not be first taught. To this I would reply, that the "Names of the Letters" are not elements in the sounds of words; or are so only in a comparatively small number of cases. To the twenty-six letters of the alphabet, the child is taught to give twenty-six sounds, and no more. According to Worcester, however,—who may be considered one of the best authorities on this subject,—the six vowels only, have, collectively, thirty-three different sounds. In addition to these, there are the sounds of twenty consonants, of diphthongs and triphthongs. The consonants also vary in sound, according to the word in which they are used, as the hard and soft sound of *c*, and of *g*; the soft and the hissing sound of *s*; the soft or flat sound of *x*, like *gz*; the soft and sharp sound of *th*, as in *this* and *thin*; the different sounds of the same letters, as in *chaise*, *church*; and the same sounds of different letters, as in *tion*, *sion*; in *cial*, *tial*, *sial*; *cious*, *ceous*, *tious*; *geous*, *gious*, &c. &c. It would be difficult, and would not compensate the trouble, to compute the number of sounds differing from the alphabetic, which a good speaker gives to the different letters and combinations of letters in our language,—not including the changes of rhetorical emphasis, cadence and intonation. But if analyzed, they would be found to amount to hundreds. Now how can twenty-six sounds be the elements of hundreds of sounds as elementary as themselves? Generally speaking, too, before a child begins to learn his letters, he is already acquainted with the majority of elementary sounds in the language, and is in the daily habit of using them in conversation. Learning his letters, therefore, gives him no new sound; it even restricts his attention to a small part of those which he already knows. So far, then, the learning of his letters contracts his practice; and were it not for keeping up his former habits of speaking, at home and in the playground, the teacher, during the six months or year in which he confines him to the twenty-six sounds of the alphabet, would pretty nearly deprive him of the faculty of speech.

But there is another effect of learning the names of the letters first, still more untoward than this. The letter *a*, says Worcester, has seven sounds, as in *fate*, *fat*, *fare*, *far*, *fast*, *fall*, *liar*. In the alphabet, and as a name, it has but one,—the long sound. Now suppose the words of our language in which this letter occurs, to be equally divided among these seven classes. The consequence must be that as soon as the child begins to read, he will find one word in which the letter *a* has the sound he has been taught to give it, and six words in which it has a different sound. If, then, he follows the instruction he has received, he goes wrong six times to going right once. Indeed, in running over a score of his most familiar words,—such as

papa, mama, father, apple, hat, cat, rat, ball, fall, call, warm, swarm, man, can, pan, ran, brass, glass, water, star, &c., he does not find, in a single instance, that sound of *a* which he has been taught to give it in the alphabet. In an edition of Worcester's Dictionary before me, I find more than three thousand words whose initial letter is *a*; and yet amongst all these there are not a hundred words in which this initial letter has the long or alphabetical sound;—that is, the cases are more than thirty, where the young reader would be wrong if he followed the instruction given him, to one where he would be right. This, surely, is a most disastrous application of the principle, that the elements of a science must be first taught.

The letter *e*, the most frequent vowel in the English language, has five sounds, as in *mete, met, there, her, fuel*. In Worcester's Dictionary, before referred to, there are two hundred and twenty-six words whose initial syllable is *be*, but in only eleven cases has the letter *e* the long or alphabetic sound. The remarks made above, therefore, in relation to the letter *a*, apply in their full force to this vowel. So of the rest. *Such* is the facility which learning the names of the letters gives to reading!

In regard to all the vowels it may be said, not only that, in the very great majority of cases, their sounds, when found in words, are different from their names as letters,—so that the more perfectly the child has learned them as letters, the more certain will he be to miscall them in words,—but that these different sounds follow each other, in books, in the most promiscuous manner. Were there any law of succession among these sounds, so that the short sound of any one vowel should universally follow the long sound; the obscure, the broad, &c.; or, were one of the sounds used *twice* in succession, and then another of them *once*, and so on, following some rule of alternation, the evil would be greatly mitigated. The sagacious thrower of dice, by retaining in his mind a long series of the throws last made, calculates with some approach to certainty what face will next turn up; for, in the long-run, the numbers of the different faces turned up will be nearly equal. But no finite power can tell by any calculation according to the doctrine of chances, or by proceeding on the law of exhaustion, what sound of any vowel will next turn up, in reading a book of English. There is too, in the human mind, a faculty corresponding to the law of periodicity, sometimes followed by nature, so that if an event in nature happens every other year, or once in seven, or in forty years, the sagacious and philosophic mind penetrates to the law and grasps it. But the succession of the different vowel sounds in the English language, is as lawless as chaos, and leaves all human acumen or perspicacity in bewilderment.

Did the vowels adhere to their own sounds, the difficulty would be greatly diminished. But, not only do the same vowels appear in different dresses, like masqueraders, but, like harlequins, they exchange garbs with each other. How often does *e* take the sound of *a*, as in *there, where, &c.*; and *i*, the

sound of *e*; and *o*, the sound of *u*; and *u*, the sound of *o*; and *y*, the sound of *i*.

In one important particular, the consonants are more perplexing than the vowels. The very definition of a consonant, as given in the spelling-books, is, "a letter which has no sound, or only an imperfect one, without the help of a vowel." And yet the definers themselves, and the teachers who follow them, proceed immediately to give a perfect sound to all the consonants. If a consonant has "only an imperfect sound," why, in teaching children to read, should not this imperfect sound be taught them? And again, in giving the names of the consonants, why should the vowel be sometimes prefixed, and sometimes suffixed? In *b*, *c*, *d*, &c., the vowel follows the consonant, as *be*, *ce*, *de*; in *f*, *l*, *m*, &c., the vowel precedes it, as *ef*, *el*, *em*. But when found in words, the vowel precedes the consonant, in the first class of cases, as often as it follows it; and in the latter class of cases, it follows as often as it precedes. The name of the letter *b* is written *be*; but where is the sound of *be* in *ebb*, *web*, *ebony*, *ebullition*, *abode*, *abound*, and in hundreds of other cases? The name of the letter *c* is written *ce*; but, in the first place, *c* is always sounded like *s*, or *k*; and in the second place, where is there any similitude to the sound of *ce* in the words *cap*, *cite*, *cold*, *cube*, *cynic*? Where, too, is the sound of *ce*, in words where either of the vowels precedes the *c*,—as in *accent*, *echo*, *ichthyology*, *occasion*, &c.? The principle of this remark applies to hundreds, probably to thousands of cases. So, too, if *b* is *be*, then *be* is *bee*, the name of an insect; and if *l* is *el*, then *el* is *cel*, the name of a fish.

The name-sound of the letter *r*, as taught in the alphabet, is *ar*; but where is this sound in all those cases where *r* precedes the vowel in the formation of a syllable or word, as in *rain*, *rest*, *rich*, *rock*, *run*, *rye*?—they are not sounded *ar-ain*, *ar-est*, &c.

If such an accumulation of evidence were insufficient to convince any reasonable person, it would be easy to go through with all the letters of the alphabet, and to show,—in regard to the vowels,—that when found in words, they receive only occasionally the sounds which the child is taught always to give them as letters; and,—in regard to the consonants,—that they never, in any case, receive the sounds which the child is taught to affix to them. I believe it is within bounds to say, that we do not sound the letters in reading once in a hundred times, as we were taught to sound them when learning the alphabet. Indeed, were we to do so in one tenth part of the instances, we should be understood by nobody. What analogy can be pointed out between the rough breathing of the letter *h*, in the words *when*, *where*, *how*, &c., and the "name-sound," (aytch, aitch, or aych, as it is given by different spelling-book compilers,) of that letter, as it is taught from the alphabet?

This subject might be further illustrated by reference to other languages,—the Greek, for instance. Will the names of the letters, *kappa*, *omicron*, *sigma*, *mu*, *omicron*, *sigma*, make the word *kosmos*? And yet these letters come as near making that

word, as those given by the Rev. Mr. Ottiwell Wood, at a late trial in Lancashire, England, did to the sound of his own name. On Mr. Wood's giving his name to the court, the judge said, "Pray, Mr. Wood, how do you spell your name?" to which the witness replied;—"O double T, I double U, E double L, double U, double O, D." In the anecdote it is added, that the learned judge at first laid down his pen in astonishment; and then, after making two or three unsuccessful attempts, declared he was unable to record it. Mr. Palmer, from whose Prize Essay this anecdote is taken, gives the following account of the manner in which children were taught to read the first sentence in Webster's old spelling-book;—*En-o*, no, *emm-ai-en*, man, *emm-ai-uy*, may, *pee-you-tee*, put, *o-double-eff*, off, *tee-aitch-ee*, the, *ell-ai-double-you*, law, *o-eff*, of, *gee-o-dee*, God.

Some defenders of the old system have attempted to find an analogy for their practice, in the mode of teaching to sing by first learning the gamut. They compare the notes of the gamut which are afterwards to be combined into tunes, to the letters of the alphabet to be afterwards combined into words. But one or two considerations will show the greatest difference between the principal case and the supposed analogy. In written music there is always a scale consisting of at least five lines, and of course with four spaces between, and often one or two lines and spaces above or below the regular scale; and both the name of a note and the sound to be given it can always be known by observing its place in the scale. To make the cases analogous, there should be a scale of thirty-three places, at least, for the six vowels only,—and this scale should be enlarged so as to admit the twenty consonants, and all their combinations with the vowels. Such a scale could hardly be crowded into an octavo page. The largest pages now used would not contain more than a single printed line each; and the matter now contained in an octavo volume would fill the shelves of a good sized library. If music were taught as unphilosophically as reading;—if its eight notes were first arranged in one straight vertical line, to be learned by name, and then transferred to a straight horizontal line, where they should follow each other promiscuously, and without any clew to the particular sound to be given in each particular place, it seems not too much to say that not one man in a hundred thousand would ever become a musician.

The comparison sometimes made between reading and arithmetic, fails for the same reasons. In arithmetic, the Arabic figures, when standing by themselves, have an invariable value; and when combined, their value is always determined by a certain law of decimal progression. The figure 5 is always five. It may be 5 units, 5 tens, 5 hundreds, &c.; but it is always five; and whether it is 5 units, 5 tens, or 5 hundreds, is infallibly known by the place it occupies. If we knew that the vowel *a* would always be long, if found at the end of a word; that it would be short, if found one place to the left; grave, if found two; and broad, if found three, and so on, there would then be one element of comparison between the cases;

and the argument might have, what it now seems to want, a shadow of plausibility.

There is one fact, probably within every teacher's own observation, which should be decisive on this subject. In learning the alphabet, children pronounce the consonants as though they were either preceded or followed by one of the vowels;—that is, they sound *b* as though it were written *be*, and *f*, as though written *ef*. But when they have advanced ever so little way in reading, do they not enunciate words where the letter *b* is followed by one of the *other* vowels, or where it is *preceded* by a vowel, as well as words into which their own familiar sound *be*, enters? For example, though they have called *b* a thousand times as if it were written *be*, do they not enunciate the words *ball*, *bind*, *box*, *bug*, &c., as well as they do the words *besom*, *beatific*, &c.? They do not say *be-all*, *be-ind*, *bè-ox*, *be-ug*, &c. Do they not articulate the words *ebb*, *web*, &c., where the vowel comes first; or the words *bet*, *bell*, *beyond*, &c., where the vowel is short, or obscure, as well as they do those words which have their old accustomed sound of *b*, with the long sound of *e*? So of the letter *f*, which they have been accustomed to sound as though written *ef*. Do they not articulate the word *fig*, as well as they do the first syllable of the word *effigy*? Nay, except they are very apt, and remember in a remarkable manner the nonsense that has been taught them, do they ever call *fig*, *ef-ig*, or *father*, *ef-ather*? Happy incapacity of a bright nature to be turned into a dunce!

The teachers in Prussia and Saxony invariably practise what is called by them the *lautir*, (pronounced *lauteer*,) method. In Holland the same method is universally adopted. With us, it is known by the name *phonic*. It consists in giving each letter, when taken by itself, the sound which it has when found in combination,—so that the sound of a regular word of four letters is divided into four parts; and a recombination of the sounds of the letters makes the sound of the word.

There are two reasons why this *lautir* or *phonic* method is less adapted to the English language than to the German;—first, because our vowels have more sounds than theirs, and secondly, because we have more silent letters than they. This is an argument, not against their method of teaching, but in favor of our commencing to teach by giving words before letters. And I despair of any effective improvement in teaching young children to read, until the teachers of our primary schools shall qualify themselves to teach in this manner;—I say, until they shall *qualify* themselves, for they may attempt it in such a rude and awkward way as will infallibly incur a failure. As an accompaniment to this, they should also be able to give instruction according to the *lautir* or *phonic* method. It is only in this way that the present stupefying and repulsive process of learning to read can be changed into one full of interest, animation and instructiveness, and a toilsome work of months be reduced to a pleasant one of weeks.

Having given an account of the reading lesson of a primary class, just after they had commenced going to school, I will

follow it with a brief account of a lesson given to a more advanced class. The subject was a short piece of poetry describing a hunter's life in Missouri. It was first read,—the reading being accompanied with appropriate criticisms as to pronunciation, tone, &c. It was then taken up verse by verse, and the pupils were required to give equivalent expressions in prose. The teacher then entered into an explanation of every part of it, in a sort of oral lecture, accompanied with occasional questions. This was done with the greatest minuteness. Where there was a geographical reference, he entered at large into geography, where a reference to a foreign custom, he compared it with their customs at home; and thus he explained every part, and illustrated the illustrations themselves, until, after an entire hour spent upon six four-line verses, he left them to write out the sentiment and the story in prose, to be produced in school the next morning. All this was done without the slightest break or hesitation, and evidently proceeded from a mind full of the subject, and having a ready command of all its resources.

An account of one more lesson will close what I have to say on the subject of reading. The class consisted of young lads, belonging to a Burgher school, which they were just about leaving. They had been reading a poem of Schiller,—a sort of philosophical allegory,—and when it was completed, the teacher called upon one of them to give a popular exposition of the meaning of the piece. The lad left his seat, stepped to the teacher's desk, and, standing in front of the school, occupied about fifteen or twenty minutes in an extemporaneous account of the poem, and what he supposed to be its meaning and moral.

ARITHMETIC AND MATHEMATICS.

Children are taught to cipher, or, if need be, to count, soon after entering school. I will attempt to describe a lesson which I saw given to a very young class. Blocks of one cube, two cubes, three cubes, &c., up to a block of ten cubes, lay upon the teacher's desk. The cubes on each block were distinctly marked off, and differently colored,—that is, if the first inch or cube was white, the next would be black. The teacher stood by his desk, and in front of the class. He set up a block of one cube, and the class simultaneously said *one*. A block of two cubes was then placed by the side of the first, and the class said *two*. This was done until the ten blocks stood by the side of each other in a row. They were then counted backwards, the teacher placing his finger upon them, as a signal that their respective numbers were to be called. The next exercise was, "two comes after one, three comes after two," and so on to ten; and then backwards, "nine comes before ten, eight comes before nine," and so of the rest. The teacher then asked, What is three composed of? A. Three is composed of one and two. Q. Of what else is three composed? A. Three is composed of three ones. Q. What is four composed of? A. Four is composed of four ones, of two and two, of three and one.

Q. What is five composed of? **A.** Five is composed of five ones, of two and three, of two twos and one, of four and one.

Q. What numbers compose six? seven? eight? nine? To the latter the pupil would answer, "Three threes make nine; two, three and four make nine; two, two and five make nine; three, four and two make nine; three, five and one make nine," &c. &c.

The teacher then placed similar blocks side by side, while the children added their respective numbers together, "two twos make four;" "three twos make six," &c. The blocks were then turned down horizontally to show that three blocks of two cubes each were equal to one of six cubes. Such questions were then asked as, how many are six less than eight? five less than seven? &c. Then, how many are seven and eight?

The answer was given thus; eight are one more than seven, seven and seven make fourteen, and one added makes fifteen; therefore eight and seven make fifteen.

Q. How many are six and eight? **A.** Eight are two more than six, six and six make twelve, and two added make fourteen. Or it might be thus; six are two less than eight, eight and eight are sixteen, two taken from sixteen leave fourteen, therefore eight and six are fourteen.

They then counted up to a hundred on the blocks. Towards the close of the lesson, such questions as these were put, and readily answered: Of what is thirty-eight composed? **A.** Thirty-eight is composed of thirty and eight ones; of seven fives and three ones;—or sometimes thus;—of thirty-seven and one; of thirty-six and two ones; of thirty-five and three ones, &c. **Q.** Of what is ninety composed? **A.** Ninety is composed of nine tens,—of fifty and forty, &c. &c.

Thus, with a frequent reference to the blocks, to keep up attention by presenting an object to the eye, the simple numbers were handled and transposed in a great variety of ways. In this lesson, it is obvious that counting, numeration, addition, subtraction, multiplication and division were all included, yet there was no abstract rule, or unintelligible form of words given out to be committed to memory. Nay, these little children took the first steps in the mensuration of superficies and solids, by comparing the length and contents of one block with those of others.

When the pupils were a little further advanced, I usually heard lessons recited in this way: Suppose 4321 are to be multiplied by 25.* The pupil says, five times one are five ones, and he sets down 5 in the unit's place; five times two tens,—or twenty ones,—are a hundred, and sets down a cipher in the ten's place; five times three hundred are one thousand and five hundred, and one hundred to be carried make one thousand six hundred, and sets down a 6 in the hundred's place; five times four thousand are twenty thousand, and one thousand to be car-

* Thus. 4321
25

21605
8642

108025

ried make twenty-one thousand. The next figure in the multiplier is then taken,—twenty times one are twenty, and a 2 is set down in the ten's place; twenty times two tens are four hundred, and a 4 is set down in the hundred's place; twenty times three hundred are six thousand, and a 6 is set down in the thousand's place; twenty times four thousand are eighty thousand, and an 8 is set down in the ten thousand's place. Then come the additions to get the product. Five ones are five, two tens are twenty, and these figures are respectively set down; four hundred and six hundred make a thousand, and a cipher is set down in the hundred's place; one thousand to be carried to six thousand makes seven thousand, and one thousand more makes eight thousand, and an 8 is set down in the thousand's place; eighty thousand and twenty thousand make one hundred thousand, and a cipher is set down in the ten thousand's place, and a 1 in the hundred thousand's place. It is easy to see that where the multiplier and multiplicand are large, this process soon passes beyond mere child's play.

So in division. If 32756 are to be divided by 75, the pupil says, how many hundred times are seventy-five,—or seventy-five ones,—contained in thirty-two thousand and seven hundred,—or in thirty-two thousand and seven hundred ones?—four hundred times,—and he sets down a 4 in the hundred's place in the quotient; then the divisor seventy-five is multiplied, (as before,) by the four hundred, and the product is set down under the first three figures of the dividend, and there are two thousand and seven hundred remaining. This remainder is set down in the next line, because seventy-five is not contained in two thousand seven hundred any number of hundred times. And so of the residue of the process.

When there is danger that an advanced class will forget the value of the denominations they are handling, they are required to express the value of each figure in full, throughout the whole process, in the manner above described.

I shall never forget the impression which a recitation by a higher class of girls produced upon my mind. It lasted an hour. Neither teacher nor pupil had book or slate. Questions and answers were extemporaneous. They consisted of problems in Vulgar Fractions, simple and compound; in the Rule of Three, Practice, Interest, Discount, &c. &c. A few of the first were simple, but they soon increased in complication and difficulty, and in the amount of the sums managed, until I could hardly credit the report of my own senses,—so difficult were the questions, and so prompt and accurate the replies.

A great many of the exercises in arithmetic consisted in reducing the coins of one State to those of another. In Germany there are almost as many different currencies as there are States; and the expression of the value of one coin in other denominations, is a very common exercise.

It struck me that the main differences between their mode of teaching arithmetic and ours, consist in their beginning earlier, continuing the practice in the elements much longer, requiring a more thorough analysis of all questions, and in not separating

the processes, or rules, so much as we do from each other. The pupils proceed less by rule, more by an understanding of the subject. It often happens to our children that while engaged in one rule, they forget a preceding. Hence many of our best teachers have frequent reviews. But there, as I stated above, the youngest classes of children were taught addition, subtraction, multiplication and division, promiscuously, *in the same lesson*. And so it was in the later stages. The mind was constantly carried along, and the practice enlarged in more than one direction. It is a difference which results from teaching, in the one case, from a book; and in the other, from the head. In the latter case the teacher sees what each pupil most needs, and, if he finds any one halting or failing on a particular class of questions, plies him with questions of that kind until his deficiencies are supplied.

In algebra, trigonometry, surveying, geometry, &c., I invariably saw the teacher standing before the blackboard, drawing the diagrams and explaining all the relations between their several parts, while the pupils, in their seats, having a pen and a small manuscript book, copied the figures, and took down brief heads of the solution; and at the next recitation they were required to go to the blackboard, draw the figures and solve the problems themselves. How different this mode of hearing a lesson from that of holding the text-book in the left hand, while the fore finger of the right carefully follows the printed demonstration, under penalty, should the place be lost, of being obliged to recommence the solution.

GRAMMAR AND COMPOSITION.

Great attention is paid to Grammar, or, as it is usually called in the "Plan of Studies,"—the German language. But I heard very little of the ding-dong and recitative of gender, number and case,—of government and agreement, which make up so great a portion of the grammatical exercises in our schools; and which the pupils are often required to repeat until they really lose all sense of the original meaning of the terms they use. Of what service is it for children to reiterate and reassert, fifty times in a single recitation, the gender and number of nouns, about which they never made a mistake even before a grammar book was put into their hands? If the object of grammar is to teach children to speak and write their native language with propriety, then they should be practised upon expressing their own ideas with elegance, distinctness and force. For this purpose, their common every-day phraseology is first to be attended to. As their speech becomes more copious, they should be led to recognize those slight shades of distinction which exist between words almost synonymous; to discriminate between the literal and the figurative; and to frame sentences in which the main idea shall be brought out conspicuously and prominently, while all subordinate ones,—mere matters of circumstance or qualification,—shall occupy humbler or more retired positions. The sentences of some public speakers are so

arranged, that what is collateral or incidental stands out boldly in the foreground, while the principal thought is almost lost in the shade;—an arrangement as preposterous as if, in the senate chamber, the forum or the parade-ground, the president, the judge or the commanding officer, were thrust into the rear, while a nameless throng of non-officials and incognitos should occupy the places of dignity and authority. Grammar should be taught in such a way as to lead out into rhetoric as it regards the form of the expression, and into logic as it regards the sequence and coherency of the thoughts. If this is so, then no person is competent to teach grammar who is not familiar at least with all the leading principles of rhetoric and logic.

The Prussian teachers, by their constant habit of conversing with the pupils; by requiring a complete answer to be given to every question; by never allowing a mistake in termination, or in the collocation of words or clauses, to pass uncorrected, nor the sentence as corrected to pass unrepeated; by requiring the poetry of the reading lessons to be changed into oral or written prose, and the prose to be paraphrased, or expressed in different words; and by exacting a general account or summary of the reading lessons, are,—as we may almost literally say,—constantly teaching grammar;—or, as they more comprehensively call it,—the German language. It is easy to see that Composition is included under this head,—the writing of regular “essays” or “themes” being only a later exercise.

Professor Stowe gives the following account of the manner of teaching and explaining the different parts of speech.

“Grammar is taught directly and scientifically, yet by no means in a dry and technical manner. On the contrary, technical terms are carefully avoided, till the child has become familiar with the nature and use of the things designated by them, and he is able to use them as the names of ideas which have a definite existence in his mind, and not as awful sounds, dimly shadowing forth some mysteries of science into which he has no power to penetrate.

“The first object is to illustrate the different parts of speech, such as the noun, verb, adjective, adverb; and this is done by engaging the pupil in conversation, and leading him to form sentences in which the particular part of speech to be learned shall be the most important word, and directing his attention to the nature and use of the word, in the place where he uses it. For example, let us suppose the nature and use of the adverb is to be taught; the teacher writes upon the blackboard the words *here, there, near, &c.* He then says, ‘Children, we are all together in this room; by which of the words on the blackboard can you express this?’ *Children*,—‘We are all *here*.’ *Teacher*,—‘Now look out of the window and see the church; what can you say of the church with the second word on the blackboard?’ *Children*,—‘The church is *there*.’ *Teacher*,—‘The distance between us and the church is not great; how will you express this by a word on the blackboard?’ *Children*,—‘The church is *near*.’ The fact that these different words express the same sort of relations is then explained, and accord-

ingly, that they belong to the same class, or are the same part of speech. The variations of these words are next explained. 'Children, you say the church is near, but there is a shop between us and the church; what will you say of the shop?' *Children*,—'The shop is *nearer*.' *Teacher*,—'But there's a fence between us and the shop. Now when you think of the distance between us, the shop, and the fence, what will you say of the fence?' *Children*,—'The fence is *nearest*.' So of other adverbs. The lark sings *well*. Compare the singing of the lark with that of the canary bird. Compare the singing of the nightingale with that of the canary bird."

I heard excellent lessons on the different meanings which roots, or primitive words, assume, when used with different affixes or suffixes. An analogous lesson in our language would consist in giving the meanings of the different words which come from one root in the Latin, as, *convене*, *intervene*, *prevent*, *event*, *advent*, &c.; or *accede*, *recede*, *succeed*, *exceed*, *proceed*, *secede*, *precede*, *intercede*, &c.

WRITING AND DRAWING.

Such excellent hand-writing as I saw in the Prussian schools, I never saw before. I can hardly express myself too strongly on this point. In Great Britain, France, or in our own country, I have never seen any schools worthy to be compared with theirs in this respect. I have before said that I found all children provided with a slate and pencil. They write or print letters, and begin with the elements of drawing, either immediately, or very soon after they enter school. This furnishes the greater part of the explanation of their excellent hand-writing. A part of it, I think, should be referred to the peculiarity of the German script, which seems to me to be easier than our own. But after all due allowance is made for this advantage, a high degree of superiority over the schools of other countries remains to be accounted for. This superiority cannot be attributed in any degree to a better manner of holding the pen, for I never saw so great a proportion of cases in any schools where the pen was so awkwardly held. This excellence must be referred in a great degree to the universal practice of learning to draw, contemporaneously with learning to write. I believe a child will learn both to draw and to write sooner and with more ease, than he will learn writing alone;—and for this reason:—the figures or objects contemplated and copied in learning to draw, are larger, more marked, more distinctive one from another, and more sharply defined with projection, angle or curve, than the letters copied in writing. In drawing there is more variety, in writing more sameness. Now the objects contemplated in drawing, *from their nature*, attract attention more readily, impress the mind more deeply, and of course will be more accurately copied than those in writing. And when the eye has been trained to observe, to distinguish, and to imitate, in the first exercise, it applies its habits with great advantage to the second.

Another reason is, that the child is taught to draw things with which he is familiar, which have some significance and give him pleasing ideas. But a child who is made to fill page after page with rows of straight marks, that look so blank and cheerless though done ever so well, has and can have no pleasing associations with his work. The practice of beginning with making inexpressive marks, or with writing unintelligible words, bears some resemblance, in its lifelessness, to that of learning the alphabet. Each exhales torpor and stupidity to deaden the vivacity of the worker.

Again, I have found it an almost universal opinion with teachers of the art of writing, that children should commence with large hand rather than with fine. The reason for this I suppose to be, that where the letters themselves are larger, their differences and peculiarities are proportionally larger;—hence they can be more easily discriminated, and discrimination must necessarily precede exact copying. So to speak, the child becomes acquainted with the physiognomy of the large letters more easily than with that of the small. Besides, the formation of the larger gives more freedom of motion to the hand. Now, in these respects, there is more difference between the objects used in drawing and the letters of a large hand, than between the latter and fine hand; and therefore the argument in favor of a large hand, applies with still more force in favor of drawing.

In the course of my tour, I passed from countries where almost every pupil in every school could draw with ease, and most of them with no inconsiderable degree of beauty and expression, to those where less and less attention was paid to the subject; and, at last, to schools where drawing was not practised at all; and, after many trials, I came to the conclusion that, with no other guide than a mere inspection of the copy-books of the pupils, I could tell whether drawing were taught in the school or not;—so uniformly superior was the handwriting in those schools where drawing was taught in connection with it. On seeing this, I was reminded of that saying of Pestalozzi,—somewhat too strong,—that “without drawing there can be no writing.”

But suppose it were otherwise, and that learning to draw retarded the acquisition of good penmanship, how richly would the learner be compensated for the sacrifice. Drawing, of itself, is an expressive and beautiful language. A few strokes of the pen or pencil will often represent to the eye what no amount of words, however well chosen, can communicate. For the master-architect, for the engraver, the engineer, the pattern-designer, the draughtsman, moulder, machine-builder, or head mechanic of any kind, all acknowledge that this art is essential and indispensable. But there is no department of business or condition in life, where the accomplishment would not be of utility. Every man should be able to plot a field, to sketch a road or a river, to draw the outlines of a simple machine, a piece of household furniture or a farming utensil, and to delineate the internal arrangement or construction of a house.

But to be able to represent by lines and shadows what no

words can depict, is only a minor part of the benefit of learning to draw. The study of this art develops the talent of observing, even more than that of delineating. Although a man may have but comparatively few occasions to picture forth what he has observed, yet the power of observation should be cultivated by every rational being. The skilful delineator is not only able to describe far better what he has seen, but he sees twice as many things in the world as he would otherwise do. To one whose eye has never been accustomed to mark the form, color or peculiarities of objects, all external nature is enveloped in a haze, which no sunshine, however bright, will ever dissipate. The light which dispels this obscurity must come from within. Teaching a child to draw, then, is the development in him of a new talent,—the conferring upon him, as it were, of a new sense,—by means of which he is not only better enabled to attend to the common duties of life, and to be more serviceable to his fellow-men, but he is more likely to appreciate the beauties and magnificence of nature, which everywhere reflect the glories of the Creator into his soul. When accompanied by appropriate instruction of a moral and religious character, this accomplishment becomes a quickener to devotion.

With the inventive genius of our people, the art of drawing would be eminently useful. They would turn it to better account than any other people in the world. We now perform far the greater part of our labor by machinery. With the high wages prevalent amongst us, if such were not the case, our whole community would be impoverished. Whatever will advance the mechanic and manufacturing arts, therefore, is especially important here; and whatever is important for men to know, as men, should be learned by children in the schools.

But whatever may be said of the importance of this art, as it regards the community at large, its value to a school-teacher can hardly be estimated.

If the first exercises in reading were taught as they should be; if the squares of the multiplication table were first to be drawn on the blackboard, and then to be filled up by the pupils, as they should see on what reason the progressive increase of the numbers is founded; if geography were taught from the beginning, as it should be, by constant delineations upon the blackboard; then every teacher, even of the humblest school, ought to be acquainted with the art of linear drawing, and be able to form all the necessary figures and diagrams not only with correctness but with rapidity. But in teaching navigation, surveying, trigonometry, geometry, &c.—in describing the mechanical powers, in optics, in astronomy, in the various branches of natural philosophy, and especially in physiology, the teacher who has a command of this art, will teach incomparably better and incomparably faster than if he were ignorant of it. I never saw a teacher in a German school make use of a ruler or any other mechanical aid, in drawing the most nice or complicated figures. I recollect no instance in which he was obliged to efface a part of a line because it was too long, or to extend it because it was too short. If squares or triangles were to be

formed, they came out squares or triangles without any overlapping or deficiency. Here was not only much time gained, or saved, but the pupils had constantly before their eyes these examples of celerity and perfectness, as models for imitation. No one can doubt how much more correctly, as well as more rapidly, a child's mind will grow in view of such models of ease and accuracy, than if only slow, awkward and clumsy movements are the patterns constantly held before it.

I saw hand-writing taught in various ways. The most common mode for young children was that of writing on the blackboard for their imitation. In such cases, the copy was always beautifully written, and the lesson preceded by instructions and followed by corrections.

Another method which has had some currency in Germany, is this: If the mark to be copied is a simple straight line, thus, *//*, the teacher says, *one, one*, as words of command; and at each enunciation of the word, the pupils make a mark simultaneously. The teacher accelerates or retards his utterance according to the degree of facility the class has acquired. If the figure to be copied consists of an upward and downward stroke, thus, *77*, the teacher says, *one, two; one, two*, (one for the upward, the other for the downward motion of the hand,) —at first slowly, afterwards more rapidly. When the figure consists of three strokes, thus, *2*, he pronounces *one, two, three*, as before. Letters are formed in the same way.

A supposed advantage of this method consists in its retarding the motions of those who would otherwise write too fast, and hastening those who would write too slow. But for these purposes, the teacher must see that all keep time, otherwise the advantage is lost. And, on the whole, there is so much difference between the natural quickness of perception and of motion in different pupils, that there can be no such thing as a universal standard. Some scholars, whose thoughts and muscles are of electric speed, would be embarrassed by being obliged to write slowly; and others could not keep step though the music played only common time. Neither in their physical nor in their spiritual natures, does the speed of children seem to have been graduated by any one clock.

The best method which I have ever seen of teaching penmanship to large scholars, was that practised by Professor Newman, at the Normal school in Barre.*

In the schools I saw, orthography, punctuation, and the use of capitals, were early connected with the exercise of writing.

GEOGRAPHY.

In describing the manner in which Geography was taught, I must use discrimination; for, in some respects, it was taught imperfectly, in others preëminently well.

The practice seemed to be uniform, however, of beginning with objects perfectly familiar to the child,—the schoolhouse

* See Common School Journal, Vol. II., p. 345.

with the grounds around it, the home with its yards or gardens, and the street leading from the one to the other. First of all, the children were initiated into the ideas of space, without which we can know no more of geography than we can of history without ideas of time. Mr. Carl Ritter, of Berlin,—probably the greatest geographer now living;—expressed a decided opinion to me, that this was the true mode of beginning.

Children, too, commence this study very early,—soon after entering school,—but no notions are given them which they are not perfectly able to comprehend, reproduce, and express.

I found geography taught almost wholly from large maps suspended against the walls, and by delineations on the blackboard. And here, the skill of teachers and pupils in drawing did admirable service. The teacher traced the outlines of a country on the suspended map, or drew one upon the blackboard, accompanying the exhibition by an oral lecture; and, at the next recitation, the pupils were expected to repeat what they had seen and heard. And, in regard to the natural divisions of the earth, or the political boundaries of countries, a pupil was not considered as having given any proof that he had a correct image in his mind, until he could go to the blackboard, and reproduce it from the ends of his fingers. I witnessed no lesson unaccompanied by these tests.

I will describe, as exactly as I am able, a lesson which I heard given to a class a little advanced beyond the elements,—remarking that, though I heard many lessons given on the same plan, none of them were signalized by the rapidity and effect of the one I am about to describe.

The teacher stood by the blackboard, with the chalk in his hand. After casting his eye over the class to see that all were ready, he struck at the middle of the board. With a rapidity of hand which my eye could hardly follow, he made a series of those short, divergent lines, or shadings, employed by map-engravers to represent a chain of mountains. He had scarcely turned an angle, or shot off a spur, when the scholars began to cry out, Carpathian mountains, Hungary; Black Forest mountains, Wurtemberg; Giant's mountains, (Riesen-Gebirge,) Silesia; Metallic mountains, (Erz-Gebirge,) Pine mountains, (Fichtel-Gebirge,) Central mountains, (Mittel-Gebirge,) Bohemia, &c. &c.

In less than half a minute, the ridge of that grand central elevation which separates the waters that flow north-west into the German ocean, from those that flow north into the Baltic, and south-east into the Black Sea, was presented to view,—executed almost as beautifully as an engraving. A dozen crinkling strokes, made in the twinkling of an eye, represented the head-waters of the great rivers which flow in different directions from that mountainous range; while the children, almost as eager and excited as though they had actually seen

[To be continued.]